

WE CLAIM:

1. A single crystal seed alloy composition comprising:

5 nickel; and,

 in the proportion of 5 to 50 weight, % a further metal selected from the Transition Series of elements in Period VI of the Periodic Table of elements.

10 2. A single crystal seed alloy composition as claimed in claim 1, which alloy composition has a solidification temperature which is not less than 1300°C and not greater than 1400°C.

15 3. A single crystal seed alloy composition as claimed in claim 1 consisting essentially of nickel and the further metal.

20 4. A single crystal seed alloy composition as claimed in claim 1, wherein the further metal is present in the range 13 to 50 weight %.

25 5. A single crystal seed alloy composition as claimed in claim 1, wherein the alloy composition forms substantially no oxide layer when molten.

30 6. A single crystal seed alloy composition as claimed in claim 1, which alloy composition contains no aluminium.

 7. A single crystal seed alloy composition as claimed in claim 1, which alloy composition contains no titanium.

35 8. A single crystal seed alloy composition as claimed in claim 1, wherein the alloy has a

100-50-255330

solidification temperature range not greater than 50C°.

5 9. A single crystal seed alloy composition as claimed in claim 8, wherein the alloy has a solidification temperature range not greater than 20C°

10 10. A single crystal seed alloy composition comprising:

nickel; and,

10 in the proportion of 5 to 50 weight, % a further metal selected from the Transition Series of elements in Period VI of the Periodic Table of elements,

15 wherein the alloy composition has a solidification temperature which is not less than 1300°C and not greater than 1400°C, and a solidification temperature range which is not greater than 20C°.

20 11. A single crystal seed alloy composition as claimed in claim 1, wherein the further metal comprises tungsten in the range 5 to 50 weight %.

25 12. A single crystal seed alloy composition as claimed in claim 11, wherein the tungsten is present in the range 13 to 40 weight %.

30 13. A single crystal seed alloy composition consisting essentially of:
nickel; and,
tungsten in the proportion of 13 to 40 weight %, wherein the alloy composition has a solidification temperature which is not less than 1300°C and not greater than 1400°C, and a solidification temperature range which is not greater than 20C°.

35 14. A single crystal seed alloy composition as claimed in any one of claim 1, wherein the further

metal comprises tantalum in the range 5 to 50 weight %.

5 15. A single crystal seed alloy composition as claimed in claim 14, wherein the tantalum is present in the range 13 to 50 weight %.

10 16. A single crystal seed alloy composition as claimed in claim 15, wherein the tantalum is present in the range 20 to 45 weight %.

17. A single crystal seed alloy composition as claimed in claim 16, wherein the tantalum is present in the range 25 to 35 weight %.

15 18. A single crystal seed alloy composition consisting essentially of:
nickel; and,
tantalum in the proportion of 25 to 35 weight %,
20 wherein the alloy composition has a solidification temperature which is not less than 1300°C and not greater than 1400°C, and a solidification temperature range which is not greater than 20C°.